



The Abdus Salam  
**International Centre  
for Theoretical Physics**  
50th Anniversary 1964–2014



African Institute for  
Mathematical Sciences



PERIMETER



INSTITUTE FOR THEORETICAL PHYSICS



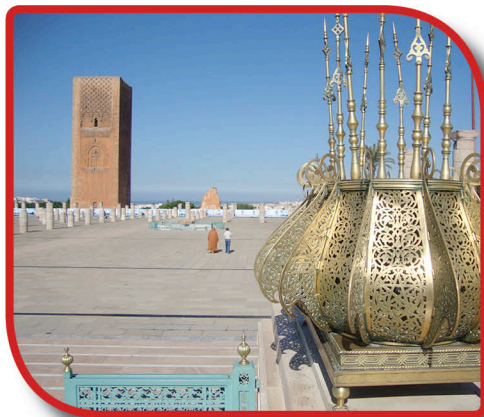
african laser centre

## School on Advances in Quantum Information Theory and Applications Rabat, 15 - 19 September 2014

## Quantum Africa Conference 3 Advances in Quantum Sciences Rabat, 22 - 26 September 2014

The Abdus Salam International Centre for Theoretical Physics (ICTP) in collaboration with the Laboratoire de Physique Théorique LPT, University Mohamed V Agdal in Rabat, is organizing a “School in Advances in Quantum Information: Theory and Applications” from 15 to 19 September 2014, followed by the “3rd Quantum Africa Conference: Advances in Quantum Sciences”, from 22 to 26 Sep 2014, both events to be held at University Mohamed V Agdal in Rabat, Morocco.

**SCHOOL:** the last years have witnessed fast growing developments in the use of quantum mechanics in technology-oriented and information-related fields, including metrology, nano-devices development, biophysics together with computation, communication and cryptography. Topics as quantum entanglement, quantum coherence and decohering phenomena both in microscopic and mesoscopic systems have been attracting the interest of a growing number of researchers, especially young ones from developing countries. A School on these themes would provide an invaluable focus on the interdisciplinary character of these disciplines and of particular importance for young researchers of the whole of Africa.



**CONFERENCE:** Quantum Africa 3 is the third conference in the Quantum Africa series, which is held biennially in Africa. The Quantum Africa conference series aims to engender exchanges and collaborations between African countries and between Africa and the rest of the world, enable Africa to play a leading research and development role in quantum science and technology, raise African stakeholder awareness of opportunities. The Conference will cover the following topics: quantum biology, quantum control, quantum communication, quantum dynamics, quantum foundations, quantum information processing, quantum materials, quantum metrology, quantum optics, quantum spintronics and ultrafast phenomena.

### **PARTICIPATION**

The School and the Conference are open to PhD students in Physics, Mathematics, Engineering and Informatics and young researchers with a PhD in these fields, from all countries that are members of the United Nations, UNESCO or IAEA. The applications should be sent to webpage of the ICTP and must include a CV and at least one reference letter. Financial support for participation in the School and/or Conference will be decided on these basis by the organizers.

### **HOW TO APPLY FOR PARTICIPATION**

The application form can be accessed at the activity website: <http://agenda.ictp.it/smr.php?2634>

Once in the website, comprehensive instructions will guide you step-by-step, on how to fill out and submit the application form.

**DEADLINE FOR REQUESTING PARTICIPATION: 15 JUNE 2014**

### **Activity Secretariat:**

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Trieste, February 2014

A. Bassi (Trieste, Italy)  
F. Benatti (Trieste, Italy)  
D. Braun (Tübingen, Germany)  
M. El Baz (Rabat, Morocco)  
Y. Hassouni (Rabat, Morocco)  
J. Mimih (Ridge NY, USA)  
A. Scardicchio (Trieste, Italy)

### **QUANTUM AFRICA STEERING COMMITTEE**

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A. Ekert (Singapore)  
P. Knight (London, UK)  
F. Petruccione (Durban, South Africa)  
B. Sanders (Calgary, Canada)  
N. Turok (Waterloo, Canada)

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C. Gerry (New York City, USA)  
V. Karimipour (Tehran, Iran)  
B. Sanders (Calgary, Canada)

### **CONFERENCE PLENARY SPEAKERS**

S. Haroche (Paris, France)  
G. Scholes (Toronto, Canada)  
S. Wehner (Singapore)

### **KEYNOTE SPEAKERS**

M. Aspelmeyer (Vienna, Austria)  
R. Blatt (Innsbruck, Austria)  
N. Datta (Cambridge, UK)  
T. Krüger (Pretoria, South Africa)  
A. Olaya-Castro (London, UK)  
B. Robert (Saclay, France)  
C. Silberhorn (Paderborn, Germany)  
Qi-kun Xue (Beijing, China)  
P. Zoller (Innsbruck, Austria)  
W. Zurek (Los Alamos, USA)